



# Soft Red Winter Production, Quality and Overseas Markets

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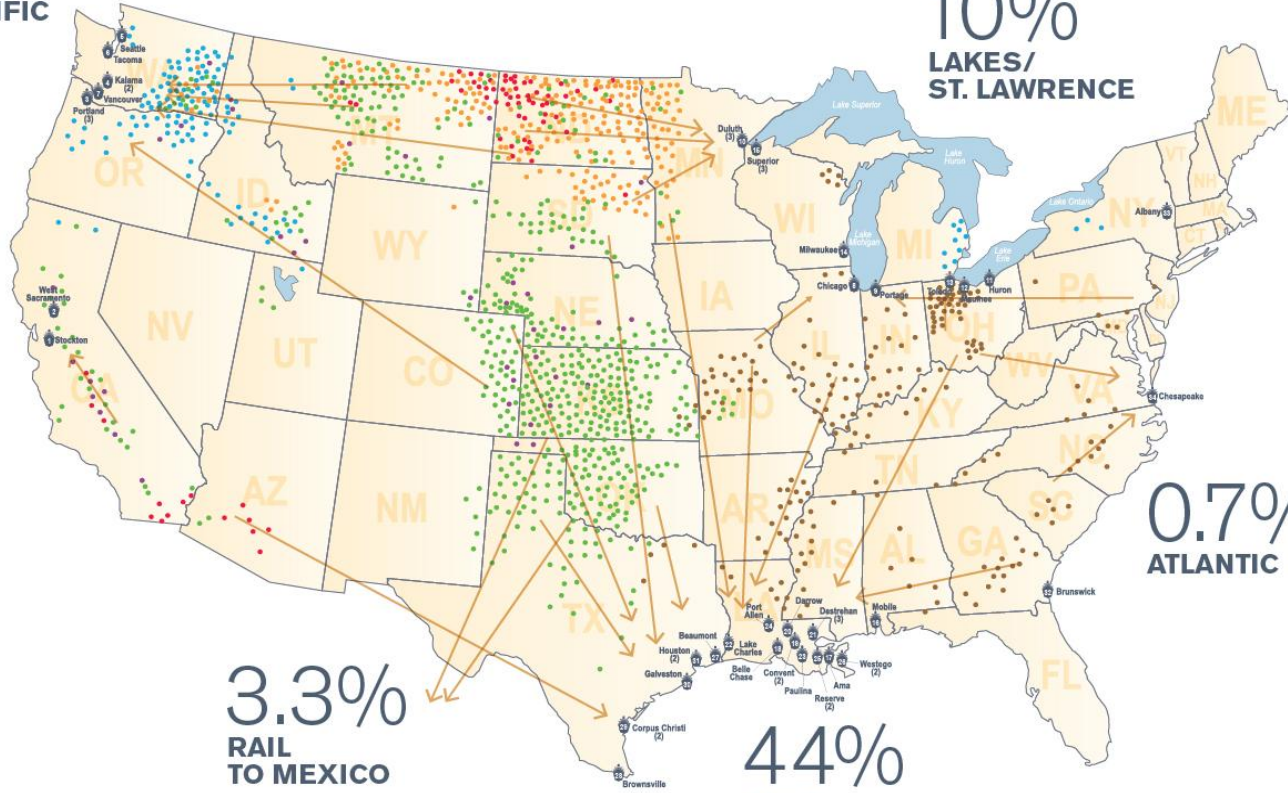


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# U.S. Wheat Production

42%  
PACIFIC

10%  
LAKES/  
ST. LAWRENCE



3.3%  
RAIL  
TO MEXICO

44%  
GULF

0.7%  
ATLANTIC

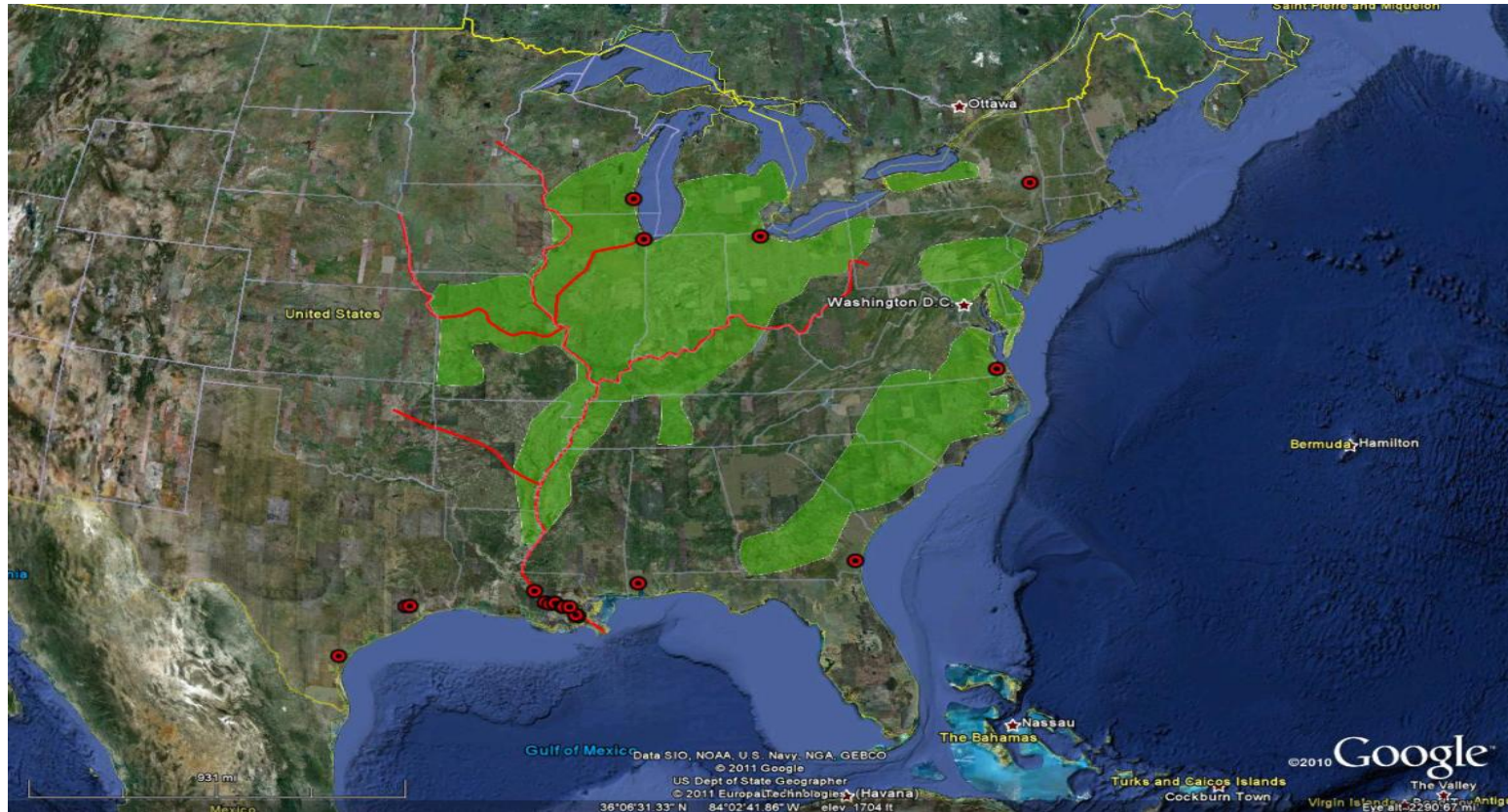
- HARD RED WINTER
- HARD RED SPRING
- SOFT RED WINTER
- SOFT WHITE
- HARD WHITE
- DURUM

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# Soft Red Winter Production Region



- Ten-year average annual production of 386 Million bushels (10.5 MMT)
- Midwest Heartland on average produces 59.4% of SRW
- Cotton Belt on average produces 23.1% of SRW
- Atlantic Coast on average produces 17.5% of SRW

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# Soft Red Winter Exports



- US regions exporting SRW:
  - 68% of SRW is exported via the Mississippi River.
  - 16% of SRW is exported via the Atlantic Seaboard (largely Norfolk).
  - 7% of SRW is exported via the Texas Gulf.
  - 5% of SRW is exported via the Interior.
  - 4% of SRW is exported via the Great Lakes and Saint Lawrence Seaway.
- Conveyance for SRW exports:
  - 93% of SRW exports leave the country via bulk ship.
  - 5% of SRW exports leave the country via rail (largely to Mexico).
  - 2% of SRW exports leave the country via container (largely to China).



# Soft Red Winter Production



- Planting time depends on the corn and soybean harvests and includes a window to avoid Hessian fly outbreaks.
  - When the Corn and Soybean harvests are late, SRW acres tend to decrease.
- Double cropping accounts for 50% of all SRW acres.
  - Soybeans planted directly after the wheat harvest and harvested the same year.
  - Used largely in more southern areas due to longer growing season.
  - Double cropping helps stabilize SRW production at a higher level.
- High Corn Prices have caused many farmers to break their rotations leading to more disease problems.

# Soft Red Winter Supply and Demand

year	Beg. Stocks	Imports	Production	Total Supply	Food Use	Seed Use	Feed and Residual Use	Domestic Use	Exports	Total Use	End. Stocks
2001/02	135	3	397	535	155	16	87	258	200	457	78
2002/03	78	13	321	412	165	16	72	253	105	357	55
2003/04	55	22	380	457	153	16	86	255	138	393	64
2004/05	64	22	380	466	155	12	89	255	122	378	88
2005/06	88	26	308	423	155	14	71	241	76	317	106
2006/07	106	20	390	515	165	16	80	261	145	406	109
2007/08	109	14	352	475	150	21	41	212	208	420	55
2008/09	55	34	614	702	155	16	161	332	199	531	171
2009/10	171	32	404	607	156	10	90	256	109	365	242
2010/11	242	29	237	508	150	16	62	228	109	337	171
2011/12	171	32	458	661	155	15	140	311	165	476	185
<b>10 year Average</b>	<b>116</b>	<b>22</b>	<b>386</b>	<b>524</b>	<b>156</b>	<b>15</b>	<b>89</b>	<b>260</b>	<b>143</b>	<b>403</b>	<b>120</b>

- Exports account for 35% of Total use
- Domestic use is 65%
- Feed and Residual is 34% of Domestic use
- Food use constant at 60%
- Seed use 6%
- Imports 7% (previous year 12%)

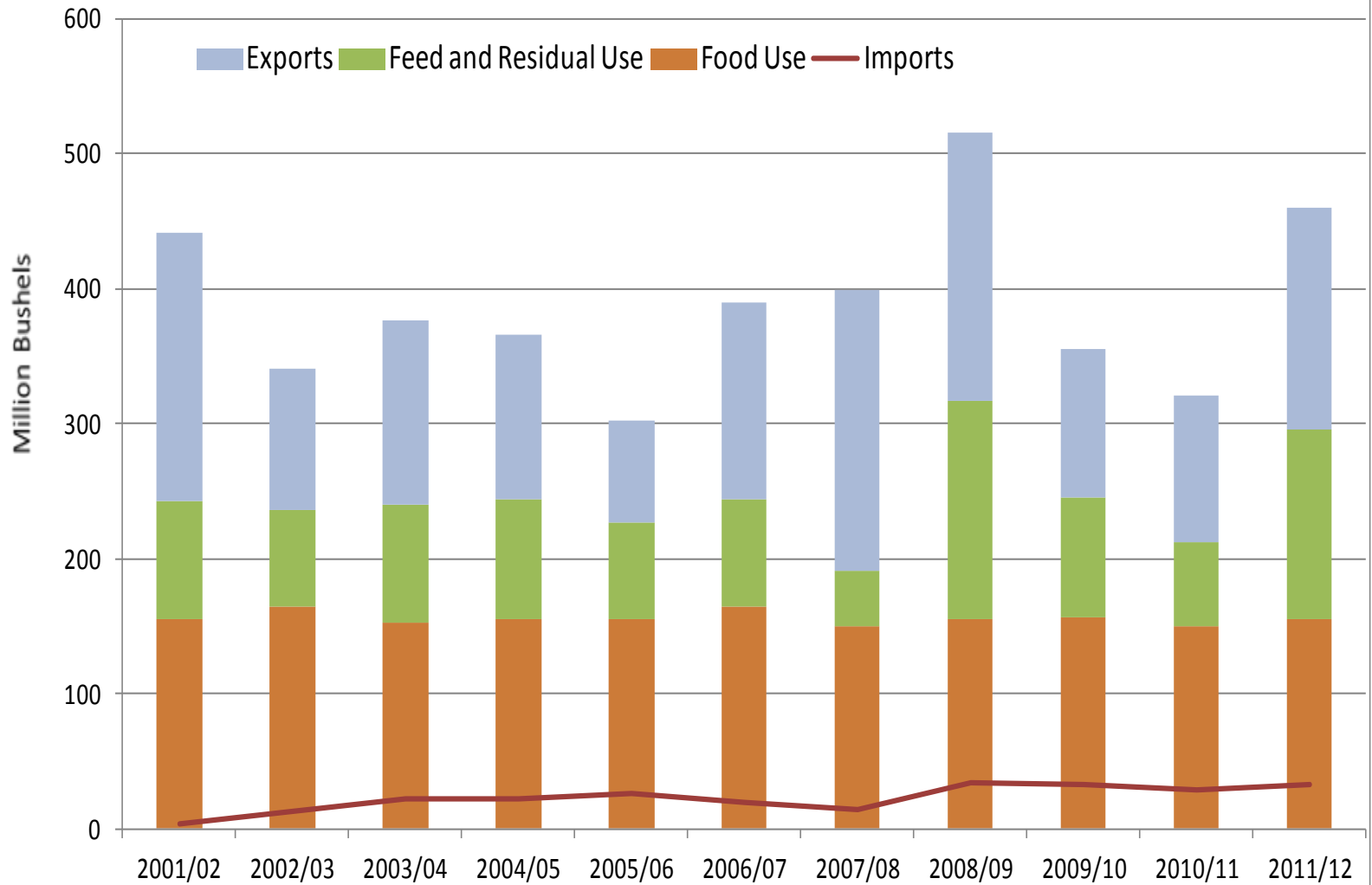
Million bushels

Source: USDA, World Agricultural Outlook Board, World Agricultural Total Supply and Demand Estimates and supporting materials.

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# Soft Red Winter Disappearance (Use)



Source: USDA, World Agricultural Outlook Board, World Agricultural Total Supply and Demand Estimates and supporting materials.

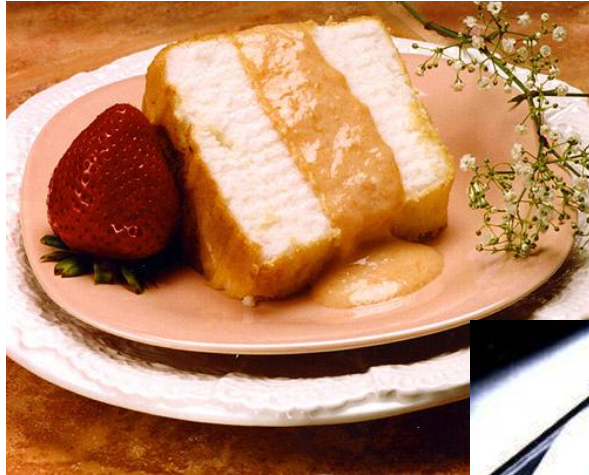
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# 2012 SRW Wheat Survey

## SRW Uses



- Flat Breads
- Pancakes
- Cakes
- Pastries
- Cookies & Crackers
- Doughnuts
- Blending Wheat

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# USW Crop Quality Reports

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2012 CROP QUALITY REPORT



**2012 Soft Red Winter Wheat  
Quality Survey**

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# 2012 SRW Wheat Quality Survey

## Grade Data

	Overall	East Coast	Gulf Ports	2011	5-Year
Test Weight (lb/bu)	60.2	59.2	60.5	58.8	58.7
Test Weight (kg/hl)	79.2	77.9	79.5	77.4	77.2
Damage - Total (%)	0.8	1.1	0.8	0.7	1.2
Foreign Material (%)	0.2	0.2	0.2	0.1	0.1
Shrunken and Broken (%)	0.5	0.5	0.5	0.4	0.6
Total Defects (%)	1.5	1.7	1.4	1.3	1.8
Grade	1	2	1	2	2

# 2012 SRW Wheat Quality Survey

## Wheat Non-Grade Data

	Overall	East Coast	Gulf Ports	2011	5-Year
Dockage (%)	0.7	0.8	0.7	0.6	0.9
Moisture (%)	12.7	13.1	12.6	12.9	12.9
Protein (%) 12%/10% mb	9.9/11.2	10.2/11.6	9.8/11.1	10.2/11.6	10.1/11.5
Wheat Ash (%) 14%/10% mb	1.50/1.75	1.46/1.70	1.51/1.76	1.53/1.78	1.55/1.80
1000 Kernel Weight (g)	34.2	35.9	33.8	31.9	32.6
Wheat Falling Number (sec)	329	306	334	328	331
Kernel Size (%) lg/med/sm	85/14/01	86/13/01	85/14/01	82/17/01	82/17/01
Single Kernel Hardness	29.2	23.3	30.5	28.9	21.2
Weight (mg)	33.9	34.8	33.7	32.3	31.5
Diameter (mm)	2.66	2.68	2.65	2.64	2.33
Sedimentation (cc)	13.4	14.6	13.2	11.9	12.4
DON (ppm)	0.3	0.5	0.3	1.1	1.2



# 2012 SRW Wheat Quality Survey

## Flour Data

	Overall	East Coast	Gulf Ports	2011	5-Year
Lab Mill Extraction (%)	73.4	73.3	73.5	71.4	69.6
Flour Color - *L	93.2	93.0	93.2	93.4	93.4
*a	-2.8	-2.8	-2.8	-3.1	-3.1
*b	8.3	8.3	8.3	8.1	8.3
Flour Protein (%) 14%/0% mb	8.4/9.8	8.8/10.2	8.3/9.7	8.6/10.0	8.5/9.9
Flour Ash (%) 14%/0% mb	0.46/0.54	0.46/0.54	0.46/0.54	0.44/0.51	0.44/0.51
Wet Gluten (%)	22.2	23.6	21.9	23.6	22.6
Gluten Index	73.5	74.8	73.1	79.6	76.9
Falling Number (sec)	342	315	348	339	336
Amylograph (65g) (BU)	603	425	644	614	641
Starch Damage (%)	4.9	5.0	4.8	4.3	4.4
Solvent Retention Capacity					
Water/50% Sucrose	58/111	60/109	58/109	54/103	55/108
5% Lactic Acid/5% Na2CO3	112/84	115/85	111/84	113/78	112/81

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# SRW Quality Targets (2010)

## Desired Ranges of Soft Red Winter Wheat Quality Traits

Category / Method	Pastry Flour Desirable Parameter Range	Cracker and Export Flour Desirable Parameter Range	5 Year Average USW Survey
<b>Test Weight / Grain Condition</b>			
Test Weight	> 58 lb/bu	> 58 lb/bu	<b>58.7 lb/bu</b>
Shriveling Factor	< 15 %	< 15 %	<b>0.6 %</b>
1000 Kernel Weight	> 27 g	> 27 g	<b>32.6 g</b>
Wheat Density (g/cc)	> 1.31	> 1.31	-
SKCS Diameter (mm)	> 2.1	> 2.1	<b>2.33</b>
SKCS Weight (mg)	> 2.7	> 2.7	<b>31.5</b>
<b>Field Sprouting</b>			
Viscograph (Amylograph)	> 500 bu	> 500 bu	<b>641bu</b>
Alpha-Amylase Activity	< 0.08 abs	< 0.08 abs	-
Falling Number	> 350 sec	> 350 sec	<b>331sec</b>
<b>Kernel Texture</b>			
Milling, Allis-Chalmers Break Flour Yield	30 - 37 %	25 - 37 %	-
Milling, Miag-Multomat Break Flour Yield	24 - 35 %	21 - 35 %	-
Milling, Quadrumat Sr. Break Flour Yield	32 - 41 %	25 - 41 %	-
Milling, Quadrumat Jr. Softness Equivalent	53 - 64 %	45 - 64 %	-
SKCS Hardness Index	< 40.0	10.0 - 40.0	<b>21.2</b>
<b>Milling Qualities</b>			
Quadrumat Jr. Flour Yield	> 67.5 %	> 67.5 %	<b>69.6</b>
Quadrumat Sr. Flour Yield	> 62 %	> 62 %	-
Quadrumat Sr. Flour Ash	< 0.420 %	< 0.420 %	-
Allis-Chalmers Flour Yield	> 75.7 %	>75.7%	-
Allis-Chalmers Flour Ash	< 0.430 %	< 0.430 %	-
Allis-Chalmers E.S.I.	< 11.5 %	< 11.5 %	-
Allis-Chalmers Milling Score	> 52	> 52	-
Allis-Chalmers Friability	> 27.2 %	>27.2%	-
Miag-Multomat Flour Yield	> 71 %	> 71 %	-
Miag Damaged Starch	< 3.5 %	<3.5%	<b>4.4%</b>
Miag Flour Ash	< 0.500 %	< 0.500 %	<b>0.500%</b>
Agtron Color	> 50 Units	> 50 Units	-

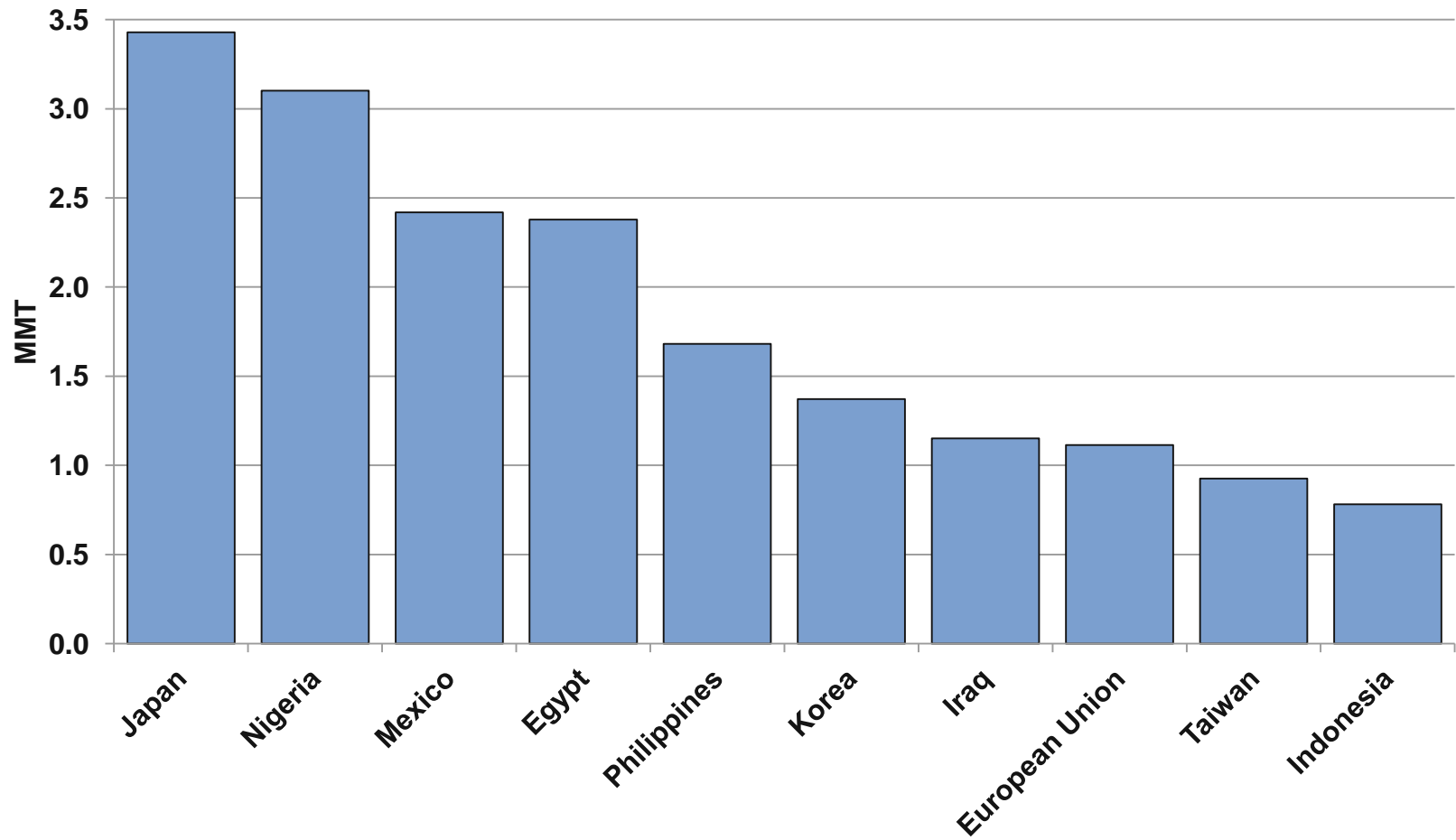
# SRW Quality Targets (continued)

Category / Method	Pastry Flour Desirable Parameter Range	Cracker and Export Flour Desirable Parameter Range	5 Year Average USW Survey
<b>Protein Content</b>			
Wheat Protein	9 - 11.5 %	10 - 15 %	<b>10.1 %</b>
Flour Protein	8 - 10 %	9 - 14 %	<b>8.5 %</b>
<b>Protein Strength</b>			
Mixograph Absorption	52 - 58 %	53 - 59 %	
Mixograph Peak Time	> 2.0 min	> 2.5 min	
Mixograph Peak Height	> 2.8 mu	> 3.0 mu	
Alveograph Peak (Overpressure)	24 - 38 mm	> 30 mm	<b>39 mm</b>
Alveograph Length (Abscissa)	106 -150 mm	> 150 mm	<b>87 mm</b>
Alveograph Work (Deformation Energy)	70 - 127 Joules ( x 10 <sup>-4</sup> )	> 127 Joules ( x 10 <sup>-4</sup> )	<b>89</b>
Farinograph Stability/Tolerance	2 - 4 min	3 - 7 min	<b>2.9 min</b>
Farinograph Peak Time	> 0.75 min	> 1.0 min	<b>1.7 min</b>
Farinograph Absorption	51 - 55 %	52 - 56 %	<b>52.0 %</b>
Acidulated Flour Viscosity (MacMichael)	90-173 cps	150-300 cps	-
<b>Solvent Retention Capacity</b>			
50% Sucrose	<89%	<89%	<b>108 %</b>
5% Lactic Acid	>87%	>87%	<b>112 %</b>
5% Sodium Carbonate	<64%	<64%	<b>81 %</b>
Distilled Water	<51%	<51%	<b>55 %</b>



# Top 10 Customers for U.S. Wheat

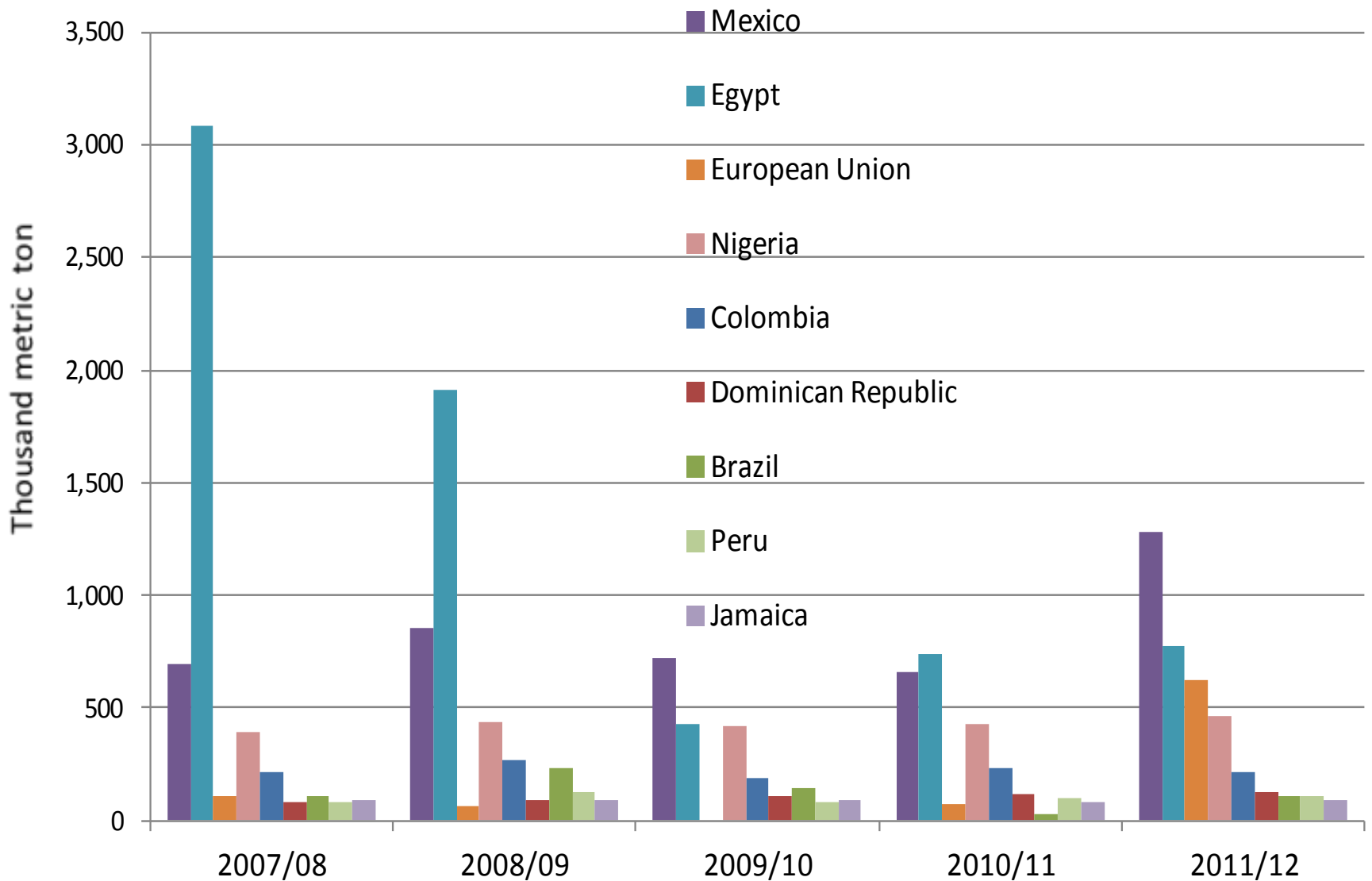
## 5-year average



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# Top 10 Soft Red Winter Buyers

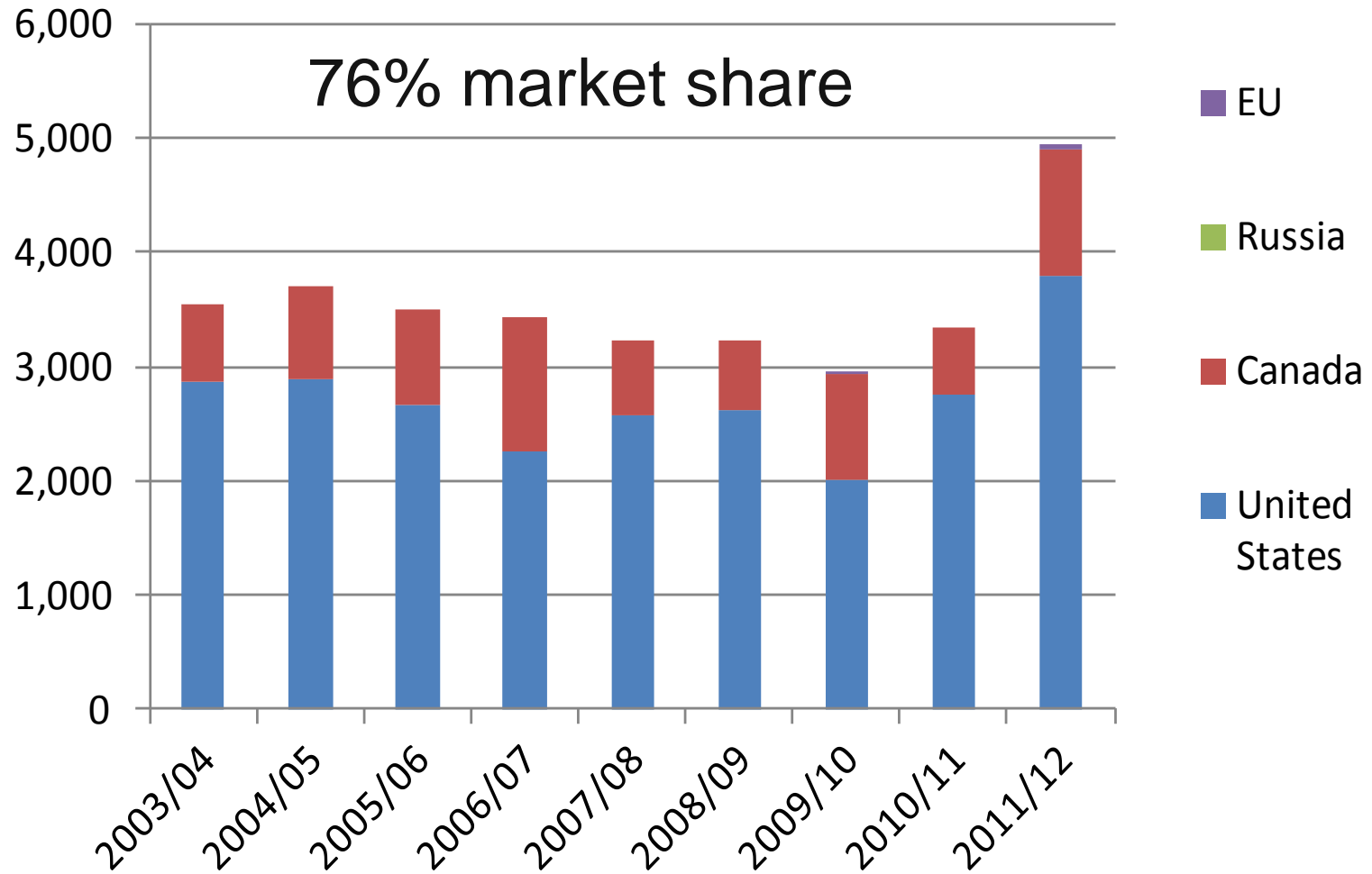


# Soft Red Winter Exports

- ❑ **Latin America accounts for 48% of SRW exports.**
  - SRW largely used for pastries, cookies, crackers, biscuits, and blending.
- ❑ **Middle East/North Africa accounts for 36% of SRW exports.**
  - Most Middle East/North Africa buyers are “price” buyers.
  - SRW largely used for flat breads used in food subsidization programs.
- ❑ **Sub-Sahara Africa accounts for 10% of all SRW exports.**
  - SRW largely used for biscuits, cookies, and blending.
- ❑ **Asia accounts for 4% of all SRW exports.**
  - SRW largely used for pastries, biscuits, and steamed breads.
- ❑ **Europe accounts for 1% of all SRW exports.**
  - SRW largely used for blending and feed.



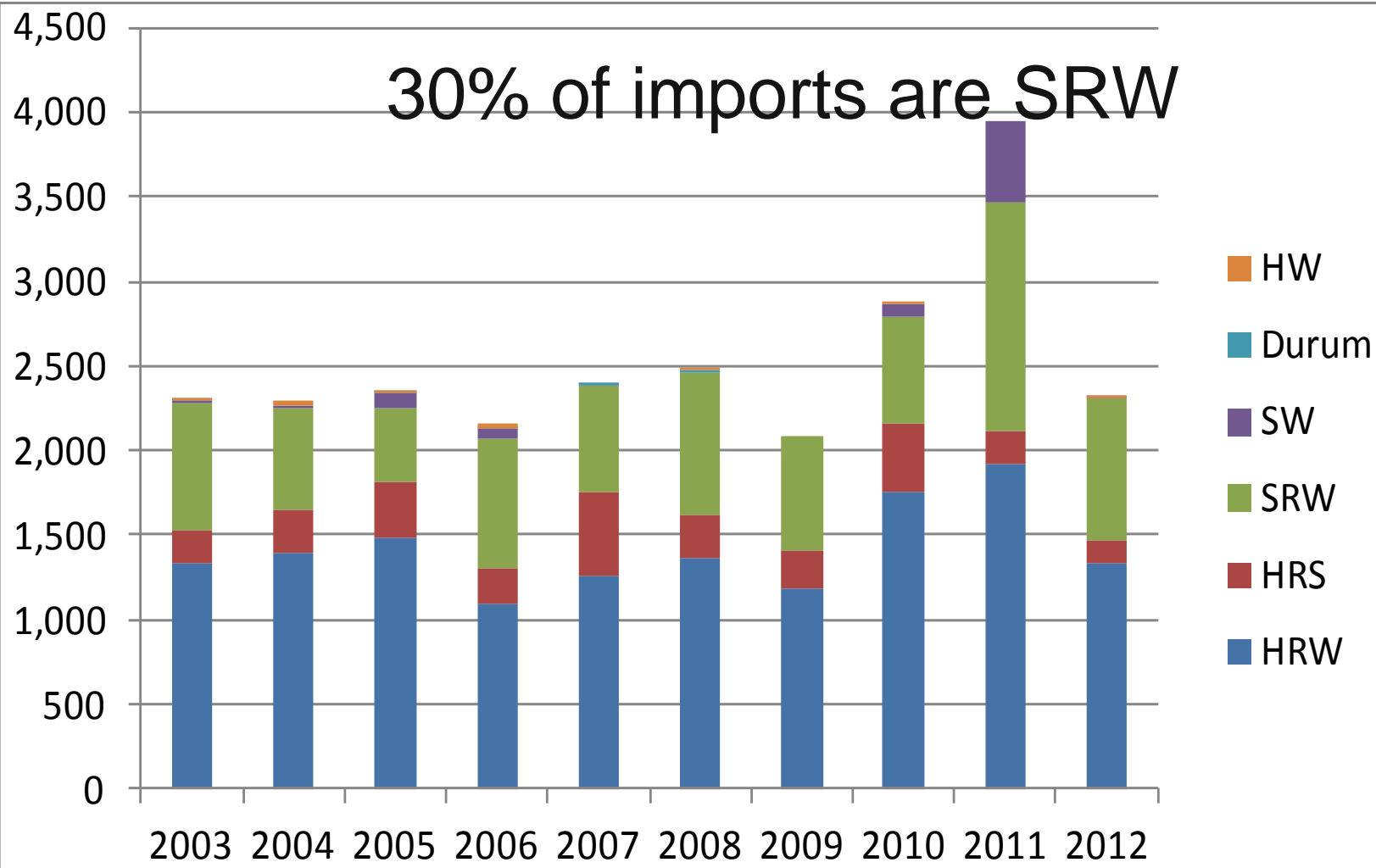
# Mexican Market



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# Mexico by US Wheat Class



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# Mexican Products



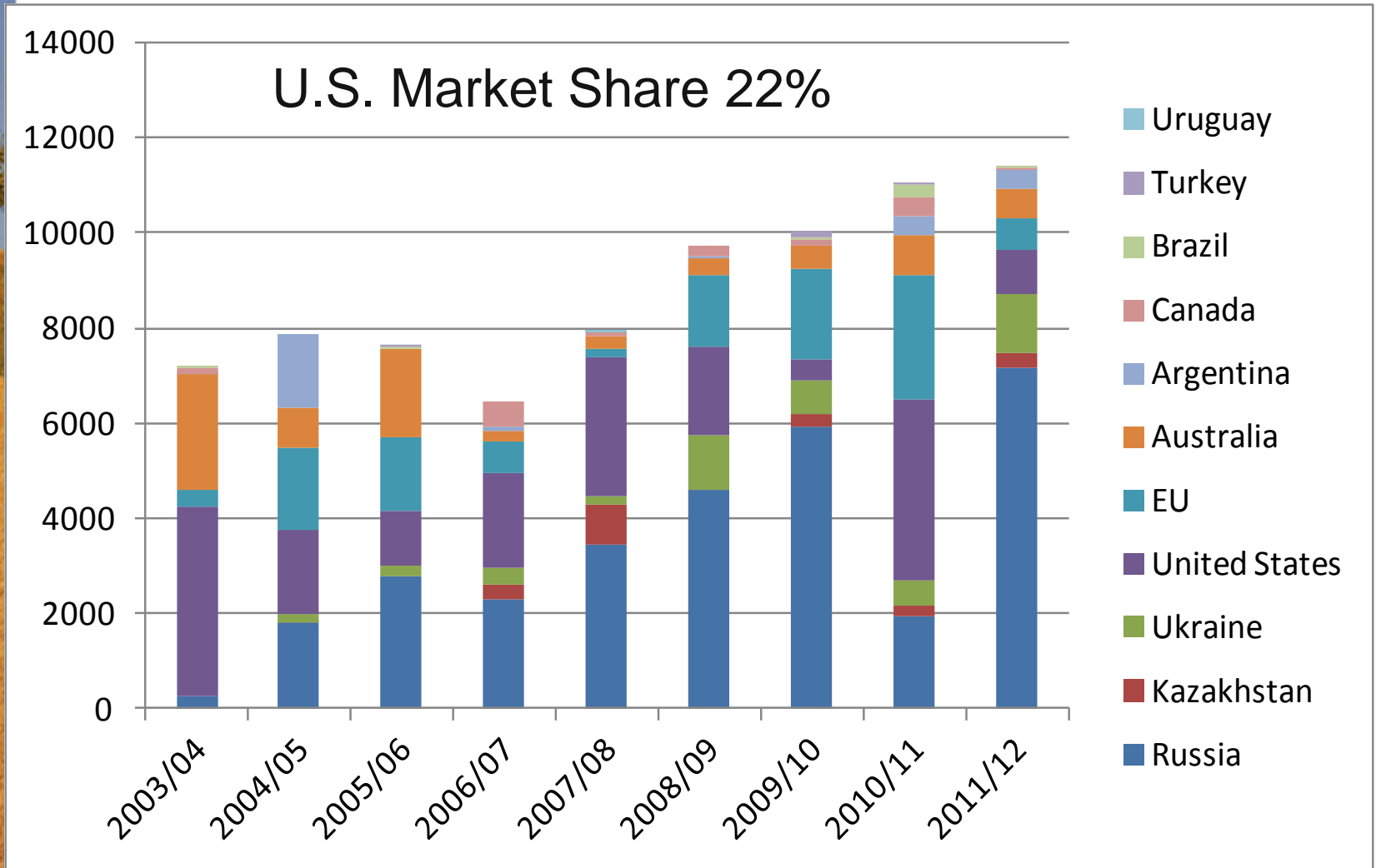
**Bolillo, Conchas, Galletas**

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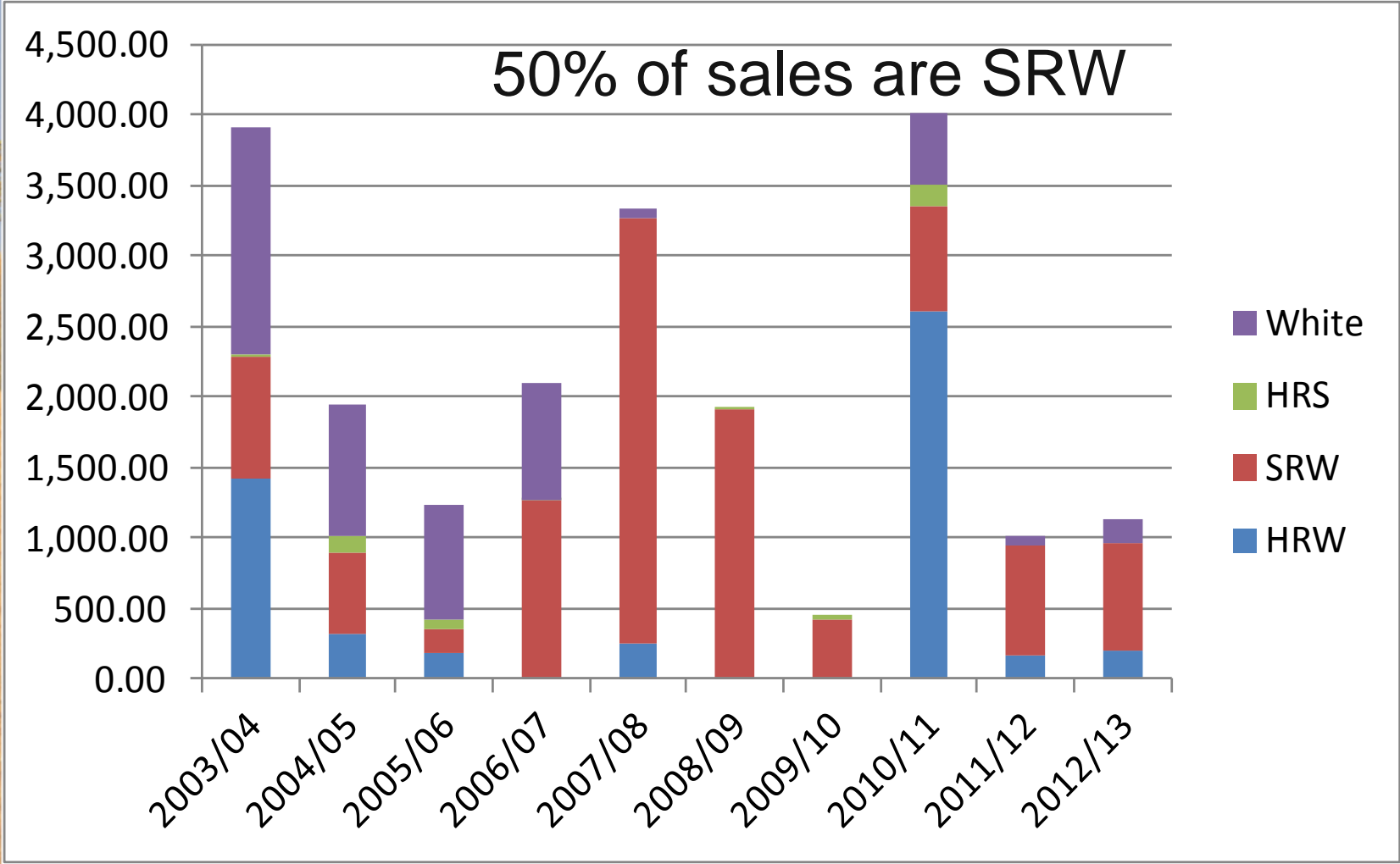


# Egyptian Market



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# Egypt Market by US Wheat Class



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# Egyptian Products



**Government  
Balidi Bread**

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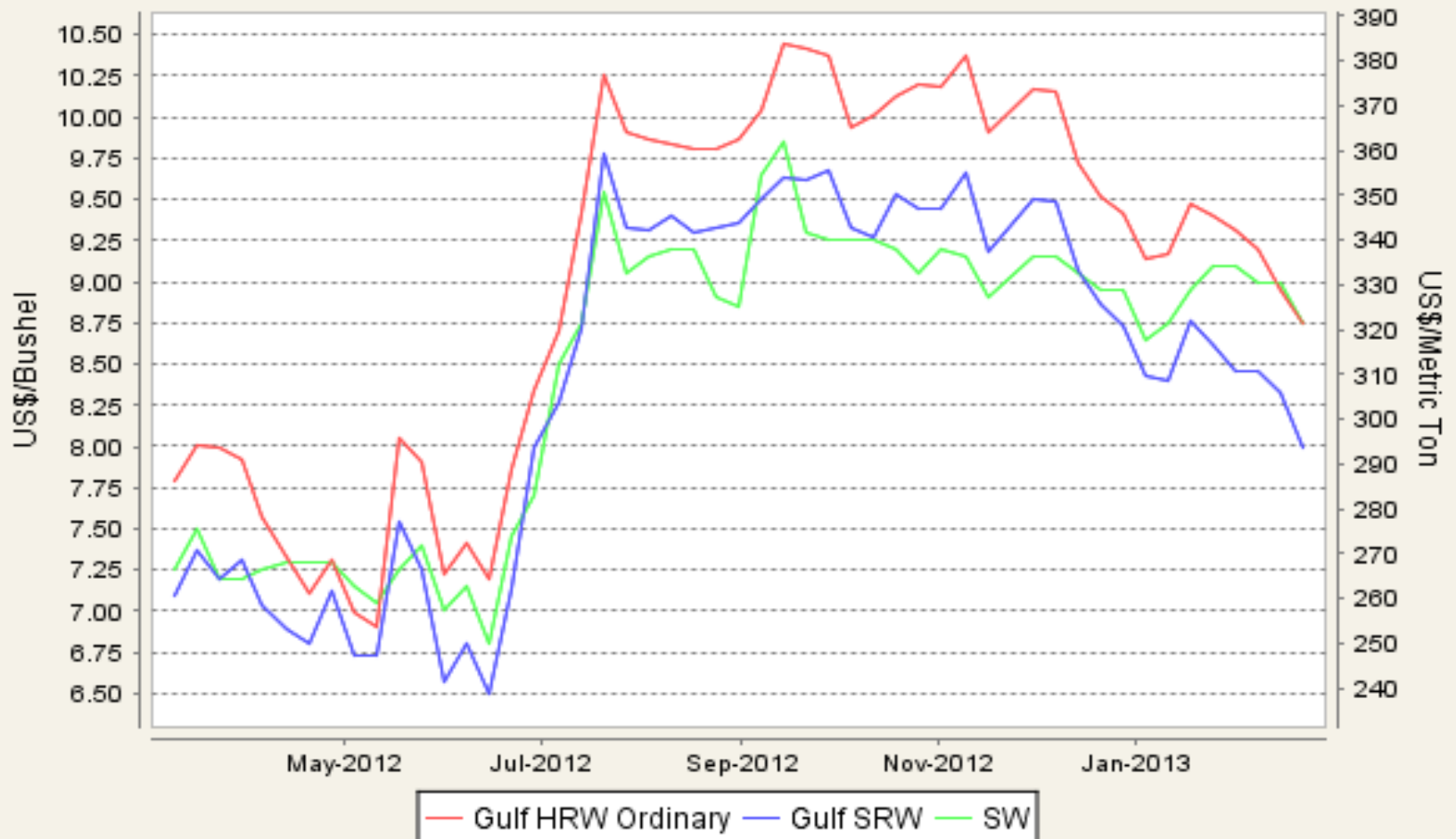
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# SRW World Market Prices (USW)

## Nearby Cash Prices at Export Location(s)

Weekly Values for Mar 5, 2012 - Mar 5, 2013



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# USW Resources

- **Price Reports:**  
<http://www.uswheat.org/reports/prices>
- **Wheat Letter:**  
<http://www.uswheat.org/newsEvents/wheatLetter>
- **USW Home Page:**  
<http://www.uswheat.org>
- **Email:**  
[info@uswheat.org](mailto:info@uswheat.org)



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